

REMARKS

Applicants respectfully request that the foregoing amendments to Claims 3-5, 8, 10, 12 and 14 be entered in order to avoid this application incurring a surcharge for the presence of one or more multiple dependent claims.

Respectfully submitted,

Date: February 4, 2002

FOLEY & LARDNER
Customer Number: 22428



22428

PATENT TRADEMARK OFFICE

Telephone: (202) 672-5416

Facsimile: (202) 672-5399

By Brian J. McNamara

Brian J. McNamara
Attorney for Applicant
Registration No. 32,789

VERSION WITH MARKINGS TO SHOW CHANGES MADE

3. (Amended) Apparatus according to [one of claims 1 and 2] claim 1, characterised in that, for an object of solid three-dimensional shape, the grid pattern chosen is tetrahedral, so that the computer is able to estimate the composition of the forces at each vertex of the tetrahedron, as a function of the deviation between the current length of each edge of the tetrahedron and the length of this edge at rest.
4. (Amended) Apparatus according to [one of the preceding claims] claim 1, characterised in that the computer is adapted to determine differences between the squares of the current length (l_j) and the preceding length and/or the length at rest (L_j) of each edge in order to determine said composition of forces.
5. (Amended) Apparatus according to [one of the preceding claims] claim 1, characterised in that the memory zone is adapted to store, in association with each mesh, mechanical parameters of the material of the mesh (λ_n , μ_n), at least partially defined locally, particularly at the level of the mesh or elements thereof.
8. (Amended) Apparatus according to [one of the preceding claims] claim 1, characterised in that it comprises a module for developing a data structure and adapted to delete mesh sides or edges (A_i) which connect two so-called "virtual" vertices (S_i).
10. (Amended) Apparatus according to [one of the preceding claims] claim 1, characterised in that the module (30, 32, 36) adapted to determine the new positional data of the vertices (Q_n) as a function of the composition of forces at each vertex, is adapted to determine said new positional data as a function of time (E3), which makes it possible to follow the evolution of the respective positions of the vertices over time.
12. (Amended) Apparatus according to [one of the preceding claims] claim 1, characterised in that the computer is capable of repeatedly determining the positional data of the vertices of the grid, with a view to determining the evolution of said positions over time ($t + \Delta t$).
14. (Amended) Apparatus according to [one of the preceding claims] claim 1, characterised in that it comprises a user interface (IU) provided with a handling device (CLA, MO) for simulating one or more forces exerted globally on the subject.